

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
2 June 2005 (02.06.2005)

PCT

(10) International Publication Number
WO 2005/051052 A1

(51) International Patent Classification⁷: H05B 41/292 (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number: PCT/JP2004/005823

(22) International Filing Date: 22 April 2004 (22.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-392984 21 November 2003 (21.11.2003) JP
2003-392983 21 November 2003 (21.11.2003) JP

(71) Applicant (for all designated States except US): MATSUSHITA ELECTRIC WORKS LTD. [JP/JP]; 1048, Oaza-Kadoma, Kadoma-shi, Osaka, 5718686 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): FUKUDA, Kenichi [JP/JP]; c/o Matsushita Electric Works, Ltd., 1048, Oaza-Kadoma, Kadoma-shi, Osaka, 5718686 (JP). YAMASHITA, Koiji [JP/JP]; c/o Matsushita Electric Works, Ltd., 1048, Oaza-Kadoma, Kadoma-shi, Osaka, 5718686 (JP)..

(74) Agents: NISHIKAWA, Yoshiaki et al.; c/o Hokuto Patent Attorneys Office Umeda-Daiichiseimei Bldg. 5th Floor, 12-17, Umeda 1-chome, Kita-ku, Osaka-shi, Osaka, 5300001 (JP).

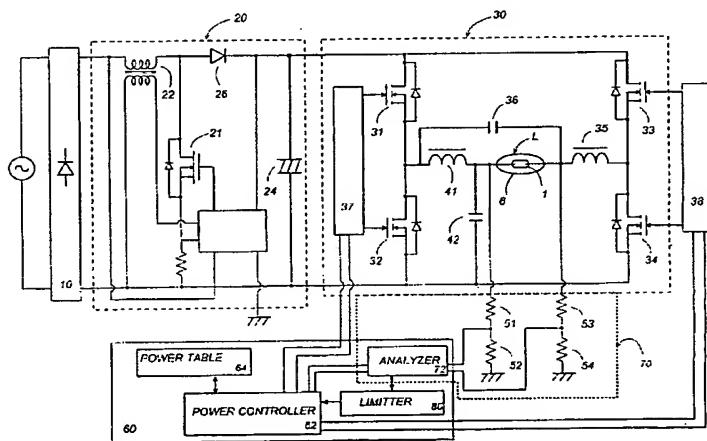
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DISCHARGE LAMP BALLAST WITH DETECTION OF ABNORMAL DISCHARGE OUTSIDE THE ARC TUBE



WO 2005/051052 A1

(57) Abstract: A discharge lamp ballast is designed to limit or interrupt its AC output power to the discharge lamp upon occurrence of an abnormal discharge outside of an arc tube. A detector is included to examine a lamp voltage once in each of the positive and negative half-cycles or in each one complete cycle of the AC output power and to identify the abnormal discharge when there is a particular change in the monitored lamp voltage. The particular change may be defined by a single logic or by combination of several logics each designed to represent specific characteristic for the abnormal discharges of several types.